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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/535,984	03/27/2000	Toshiro Obitsu	1614.1045	4143

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EXAMINER

TRUJILLO, JAMES K

ART UNIT	PAPER NUMBER
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2116

DATE MAILED: 04/22/2004

12

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/535,984

Applicant(s)

OBITSU, TOSHIRO

Examiner

James K. Trujillo

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 January 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

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DETAILED ACTION

1. The office acknowledges the receipt of the following and placed of record in the file:

Amendment B and Extension of time dated 1/13/04.

2. Claims 1-19 are presented for examination.

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

4. Claim 3 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Claim 3 does not further claim 1 because claim 1 recites "...units being detachable...", which claim 3 also recites.

5. Claims 5 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Claim 4, which claim 5 is dependent upon, recites "...**stopping the supply of power** to the PC card when said judging part judges that said **device does not use said PC card**". Claim 5 recites "...wherein said **power supply control part supplies power** to said PC card when said judging part judges that said **PC card is not used with the desired device unit**, or...". It appears that claim 5 does not further limit claim 4 because it contains a limitation that is opposite of that recited in claim 4. It appears that claim 5 attempts to broaden claim 4, which is not appropriate.

6. Claims 5 and 17 are objected to because of the following informalities:
 - a. As to claim 5, it appears that the “is not used” should be changed with “is used” so that claim 5 is properly dependent upon claim 4. Appropriate correction is required. For examination purposes this will be assumed as the proper limitation.
 - b. As to claim 17, on line 2 of the claim, “...controlling a supply of power supplies the power...” should be changes to “...controlling a supply of power that supplies power...”.
7. Applicant's arguments with respect to claim 1-19 have been considered but are moot in view of the new ground(s) of rejection.
8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
9. Claims 1-3, 6, 10 and 14-15 are rejected under 35 U.S.C. 102(b) as being anticipated by Oprescu et al., U.S. Patent 5,483,656 (hereinafter Oprescu).
10. As to claim 1, Oprescu teaches an electronic apparatus (host) [figure 1], comprising:
 - a. a judging part (CPU) judging whether a combination of plurality of units (target device, inter alia a disk drive 16) is to realize a desired function (such as at accessing stored data on a disk drive) [col. 7 line 49 et seq., figure 1], said units being detachable from said electronic device (devices are connectable to via a bus) [col. 4 lines 26-33];

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b. a power supply control part (power manager 50) controlling a supply of power from a power source (battery 26 or AC power 34) to at least one of said units (supplying power to a device for example a disk drive) [col. 6 lines 15-20] of said combination (certain devices operate simultaneously) [col. 5 lines 21-37] used to realize said desired function based on a judgment result of the judging part, based on an aspect of said combination of the plurality of units (as a result of devices operating simultaneously to perform some action).

Specifically, Oprescu teaches a system having an electronic apparatus that is connected to several devices. Oprescu recognizes that not the devices need to be operated simultaneously. Oprescu reduces the amount of power consumed by the system by powering only necessary devices to perform an action. The number of devices is based on the combination of units because Oprescu prevents an overload of the power bus.

11. As to claim 2, Oprescu taught the electronic apparatus according to claim 1, as described above. Oprescu further teaches where in the judging part comprises:

- a. an identification information obtaining part obtaining identification information from said plurality of units (database receiving and storing information on all devices) [figure 2 and col. 7 lines 12-20];
- b. an information judging part judging whether said desired function (for example the CPU requires data stored on a disk drive) is realized based on the identification information obtained from said plurality of units [col. 7 lines 21-60].

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12. As to claim 3, Oprescu taught the electronic apparatus according to claim 1, described above. Claim 3 is rejected for the same reasons as set forth hereinabove in the rejection of claim 1 because claim 3 does not further limit claim 1.

13. As to claim 6, Oprescu taught the electronic apparatus according to claim 1, as described above. Oprescu further teaches wherein the power source is a battery (battery 36) [figure 1].

14. As to claim 10, Oprescu taught the claimed electronic apparatus therefore he also taught the claimed power control apparatus.

15. As to claims 14 and 15, Oprescu taught the claimed electronic apparatus therefore he also taught the claim method for controlling a power supply

16. Claims 4-5 and 16-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Oprescu, in view of Chen, U.S. Patent 5,881,300 and Applicant's admitted prior art (AAPA).

17. As to claim 4, Oprescu taught the claimed electronic apparatus according to claim 1, as described above. Oprescu does not expressly disclose having PC cards to decode information read by a device unit. Oprescu does not expressly disclose wherein a type of PC card is identified and said power supply control part stops the supply of power to the PC card when said judging part judges that said device unit does not use said PC card. In summary, Oprescu teaches a judging part that identifies a plurality of types device units and controls power to the device units accordingly. Oprescu does expressly disclose using PC cards. However, one skilled in the art would readily recognize that the system of Oprescu must have and use PC cards in order for the device units to communication with the electronic apparatus.

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Chen teaches an electronic apparatus that stops supply of power to a PC card (PC card) when it is judged that the device unit does not use the PC card, stopping supply of power to the PC card [col. 3 lines 36-47 and col. 9 lines 60 through col. 10 lines 2].

AAAP teaches an electronic apparatus having a plurality of unit including at least one device unit reading information and at least one PC card decoding the information read by the device unit [page 3 lines 3-24].

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Oprescu by implementing the PC card power control of Chen. Both systems are directed toward reducing power consumption in systems having peripheral device unit. Implementing the teachings of Chen would further reduce power consumed in a system, such as that of Oprescu, because Chen teaches reducing power consumption for a PC card. This reduction of power is desirable in Oprescu.

It would have been obvious to one of ordinary skill in the art at the time of the invention to implement the teachings of Oprescu and Chen into the electronic apparatus as taught by AAPA because all apparatus are directed to control of a device unit. One of ordinary skill would have made the implementation because doing so would desirably reduce power consumption in the apparatus of AAPA. AAPA states that a power to a PC card and device are completely wasted. The implementation of the teaching of Oprescu and Chen would desirably conserve power in the system of AAPA.

18. As to claim 5, Oprescu together with Chen and AAPA taught the claimed electronic apparatus according to claim 4. Chen teaches that the power supply control part should supply power to the PC card when it is judged that the PC card is used with the desired device unit as

would normally be necessary to carry out a function of device unit. Chen teaches as set forth hereinabove a judging part that judges when said PC card is used with the desired device unit and the desired device unit is connected to the electronic apparatus to carry out a function of the device.

Oprescu together with Chen and AAPA does not expressly disclose wherein said power supply control part stops the supply of power to said PC card when said PC card is used with the desired device but the desired device is not connected to said electronic apparatus.

However, it would have been obvious to one of ordinary skill in the art at the time of the invention to further modify the teachings of Oprescu, Chen and AAPA by monitoring if a device is connected as, taught by Oprescu [col. 7 lines 39-44], and recognizing the new configuration without the device. Because the configuration would show that the device is no longer connected one of ordinary skill would have recognized that powering the PC card would waste power. One of ordinary skill would have recognized that the teachings of Chen would be implemented to stop the supply when there is no device to communicate to, thereby reducing unnecessary power consumption.

19. As to claim 16, Oprescu together with Chen and AAPA taught the electronic apparatus therefore they also teach the claimed method of operation.

20. As to claim 17, Oprescu together with Chen and AAPA taught the method according to claim 14 described above. Chen further taught controlling a supply of power (power is stopped) that supplies power to the PC card when a judging judges that said PC card is not used or used with a desired device unit (stopping usage of card when connected to a device) [col. 3 lines 36-47 and col. 9 lines 60 through col. 10 lines 2].

Oprescu together with Chen and AAPA does not expressly disclose wherein said controlling a supply of power stops the supply of power to said PC card when said PC card is used with the desired device but the desired device is not connected to the said electronic apparatus.

However, it would have been obvious to one of ordinary skill in the art at the time of the invention to further modify the teachings of Oprescu, Chen and AAPA by monitoring if a device is connected as, taught by Oprescu [col. 7 lines 39-44], and recognizing the new configuration without the device. Because the configuration would show that the device is no longer connected one of ordinary skill would have recognized that powering the PC card would waste power. One of ordinary skill would have recognized that the teachings of Chen would be implemented to stop the supply when there is no device to communicate to, thereby reducing unnecessary power consumption.

21. Claims 7-8 and 11-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Oprescu, in view of Kurihara et al., U.S. Patent 5,721,937.

22. As to claim 7, Oprescu teaches an electronic apparatus connectable to a plurality of units including at least one PC card slot and one driver unit (not expressly disclosed in Oprescu, but PC card slots and driver units are required for devices such as the printer, keyboard, mouse and other devices in order for the devices to communicate with the host), comprising:

- a. a judging part judging whether a combination of at least two of said plurality of units is a predetermined combination (Oprescu has a table which determines which devices are

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currently working together to accomplish a function such as the keyboard and the display and printer); and

b. a power source control part controlling power to at least one unit in the combination when said judging part judges that the combination is the predetermined combination (as set of units that is required for a function to be performed and a set that is not required) [col. 6 lines 15-20 and col. 5 lines 21-37].

Oprescu in sum teaches that it is advantageous to have power management control in a system having a plurality of devices that work together. Oprescu also teaches the opposite would have to hold. That is, a predetermined combination of unit that are not being used.

Oprescu does not expressly disclose wherein the power source control part stops power to at least one of the units in the combination.

Kurihara teaches power control for a unit wherein the power to the device is power up only when it is being used (driver is called up) and stops power to the unit when the unit is not required [col. 7 lines 35-44].

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Oprescu by powering down the predetermined combination of units that are not being used or have finished their function as taught by Kurihara. One of ordinary skill in the art would have made the modification because Kurihara teaches that doing so would conserve considerable amounts of energy and reduce heat generated by the system [col. 7 lines 41-44]. These conservation of energy and reduction of heat would be desirable in electronic apparatus of Oprescu.

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23. As to claim 8, Oprescu together with Kurihara taught the claimed apparatus according to claim 8, described above. Oprescu further teaches a table storing predetermined combinations of two of said plurality of units and the judging part judges whether the combination is one of the predetermined combinations based on the table [figure 2].

24. As to claim 9, Oprescu together with Kurihara taught the claimed apparatus according to claim 8, described above. Oprescu further teaches wherein the judging part judges whether or not a combination of said plurality of unit is the predetermined combination when the electronic apparatus is turned on when said plurality of units are connected to the electronic apparatus [col. 7 lines 29 et seq.]. The judging part of Oprescu determines whether a plurality of units is a predetermined combination and also determines if units are connected or removed from the electronic apparatus in order to carry out a function.

25. As to claims 11-13, Oprescu together with Kurihara taught the electronic apparatus therefore together they also teach the claimed power control apparatus for an electronic apparatus.

Conclusion

26. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Patent 4,747,041 to Engel et al. This patent teaches automatically activating and deactivating peripheral devices based upon system requirement.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to James K. Trujillo whose telephone number is (703) 308-6291.


The examiner can normally be reached on M-F (7:30 am - 5:00 pm) First Friday Off.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lynne Browne can be reached on (703)308-1159. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

James Trujillo
April 18, 2004



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